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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:)	For: APPARATUS AND METHOD FOR
Louis Dominic Oliveira)	REDUCING POWER CONSUMPTION
)	IN A MOBILE UNIT
Serial No.: 09/865,145)	
)	
Filed: May 24, 2001)	Group Art Unit: 2681
)	Examiner: Erika A. Gary

APPELLANT'S APPEAL BRIEF IN SUPPORT OF APPELLANT'S
APPEAL TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The Appellant hereby submits, in triplicate, the following brief in support of the appeal from the final decision by the Examiner in the above-captioned case. The Appellant respectfully requests consideration of this appeal by the Board of Patent Appeals and Interferences for allowance of the above-captioned patent application.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Commissioner for Patents, Washington, D.C. 20231, on:

November 2, 2004

(Date of Deposit)

Ann Andrews

(Name of the Person Making Deposit)

(Signature)

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REAL PARTY IN INTEREST

The real party in interest is Qualcomm Incorporated, a corporation of Delaware, having a principal place of business at 5775 Morehouse Drive, San Diego, California 92121.

I. RELATED APPEALS AND INTERFERENCES

To the best of Appellant's knowledge, there are no appeals or interferences related to the present appeal, which will directly affect, be directly affected by, or have a bearing on the Board's decision.

II. STATUS OF THE CLAIMS

Claims 1-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimanuki in view of AAPR (applicant admitted prior art).

III. STATUS OF AMENDMENTS

No further amendments have been made after the Final Office Action.

IV. SUMMARY OF INVENTION

An embodiment of the present invention discloses a mobile unit which includes a codec, a vocoder, and an audio decoder. The vocoder and the audio decoder provide respective outputs to an audio mux. A stereo/mono control unit receives an audio mux input from the audio mux. The stereo/mono control unit provides a control output to the codec to reduce power consumption in the codec and thus in the mobile unit.

The control output generated by the stereo/mono control unit is coupled to a number of components in a receive audio processing path of the codec. For example, the control output can be coupled to components such as a receive gain, a receive filter, a digital-to-analog converter, a left/right selector, and a headset amp in a right channel of the receive audio processing path.

By disabling at least one of the components in, for example, the right channel of the receive audio processing path of the codec, the control output of the stereo/mono control unit results in significant power savings. Such disabling can occur, for example, when the audio mux input received by the stereo/mono control unit contains voice signals, as opposed to music signals.

V. ISSUES

1. Are Claims 1-21 obvious under 35 U.S.C. §103(a) in view Shimanuki and AAPR (applicant admitted prior art).

VI. GROUPING OF CLAIMS

All appeals claims stand or fall together as a single group.

VII. ARGUMENT

The Shimanuki reference and AAPR (applicant admitted prior art), in combination, do not disclose every claim element of Appellant's invention.

Claim 1 recites "A device adapted to communicate with an audio mux, the audio mux receiving a vocoder input from a vocoder and an audio decoder input from an audio decoder, the device comprising: a stereo/mono control unit coupled to a codec; the stereo/mono control unit receiving an audio mux input from the audio mux, the stereo/mono control unit providing a control output to the codec to reduce power consumption in the codec."

The references cited by the Examiner do not disclose a stereo/mono control unit that

receives an audio mux input from an audio mux and provides a control output to a codec to reduce power consumption in the codec, as recited in the claims.

In the Shimanuki reference, the "controller 11 controls the power supply switch 22 to turn on and off in synchronism with the operation cycle of the receiver 2" to save electric power. (*See col. 4, lines 36-43 of the reference*). Thus, the controller 11 controls the power supply to the tuner section and the telephone section to synchronize the operations of the tuner and the telephone sections with the operation cycle of the receiver. (*See col. 4, lines 36-65 of the reference*).

For example, when a user turns on the tuner section, the controller 11 turns on the power switch 23 to supply power to the tuner section and at the same time, causes the switch 22 to stop its on-off operation and remain on. (*See col. 4, lines 36-52 of the reference*). However, when the tuner section is turned off by the user, the controller 11 turns off the switch 23 to stop supplying power to the tuner section and resumes "the on-off control over the power supply switch 22 [to] intermittently supply electric power to the telephone section for power saving." (*See col. 4, lines 53-65 of the reference*).

The Examiner states that the "on-off" control over the power supply switch 22 by the controller 11 to intermittently supply electric power to the telephone section is equivalent to a stereo/mono control unit that receives an audio mux input from an audio mux and provides a control output to a codec to reduce power consumption in the codec. (*See page 7 of the final office action dated February 25, 2004 (paper 11)*). The applicants respectfully disagree.

First, the controller 11 in the Shimanuki reference provides control signals to switches 22 and 23 but does not provide any "control output to a codec", as recited in the claims. (*See Fig. 1-2, cols. 4-5 of the reference*). Second, the controller 11 does not receive any "audio mux input from an audio mux", as recited in the claims.

Furthermore, the AAPR does not address the deficiencies of the Shimanuki reference.

The AAPR does not even disclose a stereo/mono control unit. Therefore, the references cited by the Examiner do not disclose a stereo/mono control unit that receives an audio mux input from an audio mux and provides a control output to a codec to reduce power consumption in the codec, as recited in the claims

Thus, claims 1-11 distinguish over the art of record.

Claim 12 recites "A method for processing received audio signals in a device, the method comprising: disabling a first channel in a receive audio processing path and enabling a second channel in the receive audio processing path when the audio signals comprise voice signals; and enabling the first channel in the receive audio processing path and enabling the second channel in the receive audio processing path when the audio signals comprise music signals." The references cited by the Examiner do not disclose disabling and enabling a first and second channels in a receive audio processing path based on whether the audio signal is a voice signal or a music signal, as recited in the claims.

As stated above, in the Shimanuki reference, the "controller 11 controls the power supply switch 22 to turn on and off in synchronism with the operation cycle of the receiver 2" to save electric power. (*See col. 4, lines 36-43 of the reference*). Thus, the controller 11 controls the power supply to the tuner section and the telephone section to synchronize the operations of the tuner and the telephone sections with the operation cycle of the receiver. (*See col. 4, lines 36-65 of the reference*). Thus, the Shimanuki reference does not disclose disabling and enabling a first and second channels in a receive audio processing path based on whether the audio signal is a voice signal or a music signal, as recited in the claims.

The AAPR does not address the deficiencies of the Shimanuki reference. The AAPR does not disclose disabling and enabling a first and second channels in a receive audio processing path based on whether the audio signal is a voice signal or a music signal, as recited in the claims.

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Thus, claims 12-21 distinguish over the art of record. Therefore, it is respectfully submitted that the rejection of claims 1-21 should be withdrawn.

VIII. CONCLUSION

In view of the foregoing, it is respectfully submitted that the application and all of the claims are in condition for allowance. Appellant hereby petitions for an extension of time to file this Appeal Brief, and if there are any fees due in connection with the filing of this Brief, please charge such fees to our Deposit Account No. 17-0026.

Respectfully submitted,

Dated: November 2, 2004

By: 

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IX. APPENDIX

CLAIMS ON APPEAL

1. A device adapted to communicate with an audio mux, the audio mux receiving a vocoder input from a vocoder and an audio decoder input from an audio decoder, the device comprising:

a stereo/mono control unit coupled to a codec;
the stereo/mono control unit receiving an audio mux input from the audio mux, the stereo/mono control unit providing a control output to the codec to reduce power consumption in the codec.

2. The device of claim 1 wherein the control output is coupled to a plurality of components in a receive audio processing path of the codec.

3. The device of claim 2 wherein the plurality of components are in a right channel of the receive audio processing path.

4. The device of claim 2 wherein the plurality of components are in a left channel of the receive audio processing path.

5. The device of claim 2 wherein the control output disables at least one of the plurality of components to reduce power consumption in the receive audio processing path of the codec.

6. The device of claim 2 wherein the plurality of components comprise a receive gain, a receive filter, a digital-to-analog converter, a left/right selector, and a headset amp.

7. The device of claim 6 wherein the control output disables at least one of the plurality of components to reduce power consumption in the receive audio processing path of the codec.

8. The device of claim 1 wherein the control output disables at least one of a plurality of components in a receive audio processing path of the codec when the audio mux input received by the stereo/mono control unit comprises voice signals.

9. The device of claim 8 wherein the plurality of components comprise a receive gain, a receive filter, a digital-to-analog converter, a left/right selector, and a headset amp.

10. The device of claim 1 wherein the stereo/mono control unit further receives a plug-in detection input from a plug-in detection circuit.

11. The device of claim 10 wherein the plug-in detection circuit receives an I/O input from an I/O jack.

12. A method for processing received audio signals in a device, the method comprising:

disabling a first channel in a receive audio processing path and enabling a second channel in the receive audio processing path when the audio signals comprise voice signals; and

enabling the first channel in the receive audio processing path and enabling the second channel in the receive audio processing path when the audio signals comprise music signals.

13. The method of claim 12 wherein the disabling of the first channel is performed by a stereo/mono control unit.

14. The method of claim 13 wherein the disabling of the first channel is performed by the control output of the stereo/mono control unit disabling at least one of a plurality of components in the first channel.

15. The method of claim 14 wherein the plurality of components comprise a receive gain, a receive filter, a digital-to-analog converter, a left/right selector, and a headset amp.

16. The method of claim 12 wherein the first channel is a right channel in the receive audio processing path and wherein the second channel is a left channel in the receive audio processing path.

17. The method of claim 12 wherein the first channel is a left channel in the receive audio processing path and wherein the second channel is a right channel in the receive audio processing path.

18. The method of claim 13 wherein the device comprises a vocoder and an audio decoder, wherein the vocoder provides the voice signals to an audio mux, and wherein the audio decoder provides the music signals to the audio mux.

19. The method of claim 18 wherein the stereo/mono control unit receives the audio signals from the audio mux.

20. The method of claim 12 further comprising determining whether a stereo output component is coupled to the device.

21. The method of claim 20 further comprising disabling the first channel when the stereo output component is not coupled to the device.